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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PERTTI KONTIO

Appeal 2009-002727
Application 10/671,003¹
Technology Center 2100

Decided: December 11, 2009

Before LEE E. BARRETT, THU A. DANG, and STEPHEN C. SIU,
Administrative Patent Judges.

BARRETT, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1, 3-7, 9-13, and 15. Claims 2, 8, and 14 have been canceled. We have jurisdiction pursuant to 35 U.S.C. § 6(b).

We affirm and enter a new ground of rejection as to claims 13 and 15.

¹ Filed September 25, 2003, titled "User Interface on a Portable Electronic Device." The real party in interest is Nokia Corporation.

STATEMENT OF THE CASE

The invention

The invention relates to a portable electronic devices capable of carrying out a plurality of commands, which are symbolized by a plurality of icons displayed on a touch screen so as to allow a user to select a command by contacting the screen at the icon with a pen, or other physical object. When the display screen is small, there is not enough display area to depict an icon with a meaningful shape, so the user may not be able to determine the function or command related to each icon. The invention relates to a method and apparatus for explaining the functions of the buttons on a pen-based touch screen. Spec. 1, ll. 8-29.

If the contact of the physical object with the icon is brief, the selected command is carried out. If the contact is longer than a predetermined time, a message associated with the command is provided. In the latter case, if the user still wants the selected command to be carried out, the user removes the pen off the screen directly from the icon. Otherwise, the user moves the pen out of the icon area. The message is then ended. If the user moves the pen to another icon, a different message is provided. *See Abstract.*

Illustrative claim

Claim 1 is reproduced below for illustration:

1. A method of interacting with an icon displayed on a touch screen in an electronic device, the electronic device capable of carrying a command symbolized by the icon and further capable of providing a message associated with the command, wherein the icon

is displayed at a designated area of the screen so as to allow a user to interact with the icon by using a physical object, said method comprising the steps of:

- 1) contacting the screen at the designated area by the physical object; and
- 2) removing the physical object from the screen before a selected time has expired to cause the electronic device to carry out the command, or
- 3) keeping the physical object at the designated area longer than the selected time to cause the electronic device to provide the message, and
- 4) removing the physical object from the screen after step 3 to cause the electronic device to carry out the command, or
- 5) moving the physical object off the designated area while keeping the physical object on the screen after step 3 to end the message.

The references

Clark	US 5,995,101	Nov. 30, 1999
Chew	US 6,664,991 B1	Dec. 16, 2003
		(filed Apr. 27, 2000)

The rejections

Claims 1, 3-7, 9-13, and 15 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Chew and Clark.

PRINCIPLES OF LAW

"[T]he test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art."

In re Keller, 642 F.2d 413, 425 (CCPA 1981). A rejection under 35 U.S.C. § 103(a) is based on the following factual determinations: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) any objective indicia of non-obviousness. *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966)). "[H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

FINDINGS OF FACT

Chew

Chew describes displaying a context menu in response to a gesture that consists of pressing and holding the stylus on a selection for a system-specified length of time ("tap-and-hold" gesture). Col. 1, l. 66 to col. 2, l. 4; col. 4, ll. 10-18; col. 5, ll. 23-30.

Chew describes that a context menu will display commands that are specifically relevant to an area of the screen that has been highlighted or that contains the cursor or carat. Col. 4, ll. 1-5.

Chew describes that once the context menu is displayed, a command may be selected by tapping the command with the stylus. Col. 4, ll. 27-31.

The user can dismiss the context menu without making a selection by touching the stylus outside of the context menu. Col. 4, ll. 7-9.

Chew describes that in some embodiments "the parent application substitutes a tool tip or pop-up help for the context menu." Col. 3, ll. 65-67.

Clark

Clark describes a "tool tip" in a non-touch screen environment. "In the computer world, the term 'tool tip' has been used to describe a short textual label that appears over an icon or control area in a graphical user interface (GUI) to provide a brief indication of the program function associated with the icon or control area." Col. 1, ll. 11-15.

Clark describes:

For example, referring to FIG. 1, a tool tip 50 typically appears on a computer display 28 when a user of the computer places a cursor 52 over an icon 54 in a tool bar 56 for a predetermined period of time, known as the "tool tip trigger interval" (typically about one-half second). . . . When the user selects the icon with a pointing device, such as a mouse, the corresponding function of the computer program is invoked.

Col. 1, ll. 18-28.

Clark further describes that "the user may terminate the tool tip entirely, e.g., by selecting the corresponding icon and invoking the associated program function, by moving the cursor away from the icon, or by entering a prescribed control command (e.g., a keystroke) before the trigger interval lapses." Col. 3, ll. 26-29.

Clark describes "multi-level" tool tips but this is not relevant to the proposed rejection.

CLAIM INTERPRETATION

Initially, we interpret claims 1, 7, and 13. Claim 1 recites a "method comprising the steps of: 1) contacting the screen at the designated area by the physical object; and [step 2 or (step 3 and (step 4 or step 5))]." Because claim 1 is drafted using the alternative language "or," we interpret claim 1 to be met by one or more of: "step 1 and step 2" or "step 1 and step 3 and step 4" or "step 1 and step 3 and step 5." By contrast, claim 7 requires a software program in an electronic device that carries out all of the steps and claim 13 requires code that carries out all of the steps.

ISSUE

The issue is whether Chew and Clark would have taught or suggested to one of ordinary skill in the electronic touch screen device art the method steps or device functions of interacting with icons symbolizing a command to display a message associated with the command and selecting the command before or after a message is displayed.

ANALYSIS

Claims 1, 7, and 13

Appellant argues that claims 7 and 13 are patentable for the same reasons as claim 1. Br. 14. Although we interpret claim 1 as not requiring all limitations because of the alternative language, we address all of the

limitations of claim 1 for completeness and because claims 7 and 13 require all limitations.

The preamble of claim 1 recites a "method of interacting with an icon displayed on a touch screen in an electronic device, the electronic device capable of carrying a command symbolized by the icon and further capable of providing a message associated with the command, wherein the icon is displayed at a designated area of the screen so as to allow a user to interact with the icon by using a physical object." The Examiner finds that area on the screen which is contacted by a stylus "to accomplish certain user input functions" (Chew, col. 3, ll. 43-44) corresponds to the "designated area," the "input function" is a "command," and the "context menu" or "tool tip" in Chew corresponds to a "message." Final Rej. 2. The Examiner finds that Chew describes that tapping causes selection of an entry. *Id.* at 3. The Examiner states that "Chew does not explicitly mention that the input function is a command symbolized by an icon or that the stylus up event before the expiration of the selected time causes the command to be executed." *Id.* The Examiner finds that Clark teaches that "tool tips" are commonly associated with icons and that when a user selects the icon with a pointing device, the command associated with the icon is carried out. *Id.* The Examiner concludes that it would have been obvious to provide the executable icons of Clark in the hand-held computing device of Chew to represent input functions with images. *Id.*

In the main described embodiment in Chew, the user performs a first stylus action on a list entry (e.g., 302 in Figure 3) to bring up a context menu

and then the user may select a command from this menu by second stylus action of tapping the command. We agree with Appellant's argument (Br. 9-10) that the entry cannot be the claimed "designated area" because no command is carried out regardless of the duration of the gesture made on the entry and that the tap-and-hold gesture of Chew is not the same as contacting the designated area by the physical object as claim because no command is associated with the entry. Appellant admits that "the second stylus action may be considered as equivalent with the step of contacting the designated area by the physical object as claimed," *id.*, but argues that "[n]o message is provided even if the user keeps the stylus on any one of the commands longer than the selected time," *id.* at 10-11. We agree with this argument. The description of context menus in Chew does not fit the claim language.

However, Appellant does not directly address the Examiner's reasoning that it would have been obvious to represent the input functions in Chew with icons in view of Clark. The rejection finds that the message in Chew could be a context menu or "tool tip" (Final Rej. 2) and the Examiner states in response to Appellant's argument (Br. 8) that the tool tip in Clark is not compatible with the list of entries in Chew, that Chew states that a tool tip can be substituted for a context menu. Ans. 5-6. Chew expressly states that "[i]n some embodiments, the parent application substitutes a tool tip or pop-up help for the context menu" (col. 3, ll. 65-67). Clark describes that a tool tip "in a short textual label that appears over an icon or control area in a graphical user interface (GUI)" (col. 1, ll. 12-13). Clark's definition of tool tip suggests that the alternative tool tip embodiment in Chew meets the

preamble limitation "the electronic device capable of carrying a command symbolized by the icon and further capable of providing a message associated with the command, wherein the icon is displayed at a designated area of the screen so as to allow a user to interact with the icon by using a physical object." That is, Clark fairly suggests to one of ordinary skill in the art that the alternative tool tip embodiment in Chew has commands symbolized by icons and that a tap-and-hold gesture on an icon at a designated area of the screen brings up a corresponding message (tool tip). We agree with the Examiner's conclusion (Final Rej. 3) that it would have been obvious to provide the executable icons of Clark in the device of Chew.

Chew describes displaying a tool tip in response to a tap-and-hold gesture. Chew and Clark suggest that the tool tip is associated with an icon that symbolizes a command. Thus, Chew teaches step "1) contacting the screen at the designated area by the physical object," the "tap," and step "3) keeping the physical object at the designated area longer than the selected time to cause the electronic device to provide the message," the "hold." Appellant's arguments do not address the tool tip teachings of Chew.

The question is whether the combination of Chew and Clark teaches or suggests steps 2), 4), or 5).

The Examiner finds that Chew describes that tapping causes selection of an entry, but finds that step "2) removing the physical object from the screen before a selected time has expired to cause the electronic device to carry out the command," is not taught by Chew. Final Rej. 3. The Examiner

finds that Clark teaches a user selects an icon with a pointing device to cause the command associated with the icon to be carried out. *Id.*

We disagree with the Examiner's finding that step 2 is not taught or suggested. Chew describes that a command is selected by tapping. Col. 4, ll. 27-29. Chew describes tool tips which suggests that commands are associated with icons as in Clark. "Tapping" indicates a light blow and a lifting of the stylus in a shorter time than the tap-and-hold time required to bring up a tool tip and therefore reasonably suggests step "2) removing the physical object from the screen before a selected time has expired to cause the electronic device to carry out the command." Appellant does not dispute that selecting a command by tapping was known in the touch screen art. Step 2 implicitly recites that the message is not displayed.

Based on our construction of claim 1 as requiring only steps 1 and 2, because of the alternative language, we conclude that claim 1 is unpatentable over Chew and Clark. We affirm the rejection of claim 1. Nevertheless we consider steps 4 and 5 because they are required by claims 7 and 13.

Chew does not teach step "4) removing the physical object from the screen after step 3 to cause the electronic device to carry out the command." The Examiner relies on Clark as disclosing selecting an icon at any time. Final Rej. 3. Appellant argues that Clark is a pointing device such as a mouse, but even if the pointing device can be replaced with a physical object, the user must use the physical object twice in order to invoke a command or a function: "First, the user must place the physical object on the icon to reveal the tool tip. Second, the user must tap the touch screen at the

same icon to invoke the associated function." Br. 11. "In contrast, at step 4 of the claimed invention, the command is carried out if the physical object is removed from the screen after the message is displayed. There is no need for the user to tap the screen again after the message is displayed in order to carry out the command." *Id.*

Neither Chew nor Clark describe removing a physical object from a touch screen to cause the device to carry out the command after the message is displayed. Nevertheless, we conclude that such a step or function would have been obvious to one of ordinary skill in the electronic touch screen art. "[T]he [obviousness] analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 550 U.S. at 418. "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *Id.* at 421. As noted in Chew, it was known to execute a command on a touch screen device by tapping on a command area. Chew and Clark suggests displaying a message (tool tip) associated with a command by a tap-and-hold gesture on an icon. The problem facing the person of ordinary skill in designing the interface was how to select a command after the message is displayed. There are a limited number of options for selecting the command after a tap-and-hold gesture where the physical object is positioned in contact with the designated area of the icon: (1) removing the physical object from the screen and then tapping on the designated area; or (2) removing the physical object from the screen to select the command, as recited in step 4, which is essentially a tap

with an intermediate hold period. In our opinion, both options would have been obvious to a person having ordinary skill in the art. "One or the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims." *Id.* at 419-20. "When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp." *Id.* Thus, we conclude that step 4 in claim 1 and the corresponding limitations in claims 7 and 13 would have been obvious.

As to step 5, the Examiner finds that Chew teaches a "move" gesture where the user drags the stylus outside of the context menu and concludes that it would have been obvious to use this gesture with any command related to a context menu. Ans. 7. Appellant argues that the "move" gesture is not used to end a message or context menu since the context menu is not even displayed if the user performs a drag operation. Reply Br. 2-3. Appellant argues that no rationale has been provided to modify the "move" gesture to be used in the manner recited in step 5. *Id.* at 3.

We conclude that step 5 would have been obvious. Again, there are a limited number of options for not selecting the command and ending the message after a tap-and-hold gesture when the physical object is in contact with the designated area of the icon: (1) moving the physical object off the designated area while keeping the physical object on the screen as recited in step 5; or (2) removing the physical object from the screen. In our opinion,

both options would have been obvious to a person having ordinary skill in the art. In addition, Clark describes that it was known to have a tool tip disappear if the user has not selected the icon within a predetermined amount of time or has moved the mouse. Col. 1, ll. 28-33. One skilled in the art would appreciate that moving the mouse in a mouse-based system corresponds to moving a stylus while in contact with a screen in a touch-screen system and thus would have been motivated to remove the message by moving the physical object off the designated area. Thus, we conclude that step 5 in claim 1 and the corresponding limitations in claims 7 and 13 would have been obvious.

In summary, we conclude that Chew and Clark would have taught or suggested to one of ordinary skill in the electronic touch screen device art the method steps or device functions of interacting with icons symbolizing a command to display a message associated with the command and selecting the command before or after a message is displayed. The rejection of claims 1, 7, and 13 is affirmed. As discussed, claim 1 only requires steps 1 and 2, but all steps would have been obvious.

Claims 3, 9, and 15

Claim 3 recites "[t]he method of claim 1, further comprising the step of: 6) removing the physical object from the screen after step 5; or 7) moving the physical object to a further designated area after step 5 for causing the electronic device to provide a message associated with the further designated area." Again, the alternative language "or" only requires

one of the steps. Claims 9 and 15 only require that a further message is provided if the physical object is moved to a further designated area after the physical object is moved off the designated area.

The Examiner finds that Chew describes at column 7, lines 1-8, that the user may lift the stylus before the context menu gesture is complete. Final Rej. 2-3. The Examiner also refers to 300 in Figure 3. *Id.* at 4.

Appellant argues that column 7 of Chew relates to a stylus-up event that takes place before a context menu is displayed and has nothing to do with the selection of commands in the context menu. Br. 15.

We agree that the stylus-up event at column 7 and the contact list 300 in Figure 3 of Chew relied upon by the Examiner are not relevant to the limitations of claims 3, 9, and 15. Nevertheless, we conclude that claims 3, 9, and 15 would have been obvious over Chew and Clark for essentially the reasons stated with respect to claim 1. These claims merely repeat the steps of displaying a message associated with a further designated area (it is not clear whether the "further" designated area has to be a "different" area) after displaying a first message. One of ordinary skill in the art knew that a cursor could be moved by a mouse from one icon to the next to display associated messages as shown in Clark. One of ordinary skill in the art was also aware that the mouse-controlled cursor was analogous to a user-controlled stylus touching a touch screen. Thus, one of ordinary skill in the electronic touch screen device art would have been motivated to move a stylus from one icon to the next to display messages in view of the related teachings in Clark. The rejection of claims 3, 9, and 15 is affirmed.

Claims 4-6 and 10-12

Appellant argues that claims 4-6 and 10-12 are patentable for the reasons stated with respect to the claims from which they depend. Br. 16. Because we have affirmed the rejection of the parent claims, the rejection of claims 4-6 and 10-12 is affirmed.

NEW GROUNDS OF REJECTION

Claims 13 and 15 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite and under 35 U.S.C. § 101 as failing to define patent eligible subject matter.

Claim 13 recites a "series of specific operational steps expressible in a plurality of computer codes to be executed by a data processing module . . . said series comprising: [code for performing steps]." It is not clear whether claim 13 is directed to the steps, as indicated by "said series comprising," or the code for performing the steps, as indicated by the body of the claim. This uncertainty was noted in the "Communication pursuant to Article 94(3) EPC" regarding Application 04 744 276.9.

Claim 13 can be interpreted as directed to "code" for performing steps. "Code" in the abstract is not within any of the four statutory categories of 35 U.S.C. § 101 and is not patent eligible subject matter. *See In re Nuijten*, 500 F.3d 1346, 1354 (Fed. Cir. 2007) ("If a claim covers material not found in any of the four statutory categories, that claim falls outside the plainly expressed scope of § 101 even if the subject matter is otherwise new and useful."). A "signal" cannot be patentable subject matter

because it is not within any of the four categories. *Id.* at 1357. Similarly, a "paradigm" does not fit within any of the four categories. *In re Ferguson*, 558 F.3d 1359, 1366 (Fed. Cir. 2009).

CONCLUSION

The rejection of claims 1, 3-7, 9-13, and 15 under 35 U.S.C. § 103(a) is affirmed.

A new ground of rejection is entered as to claims 13 and 15.

This decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides that "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that the appellant, **WITHIN TWO MONTHS FROM THE DATE OF THE DECISION**, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

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Requests for extensions of time are governed by 37 C.F.R. § 1.136(b).
See 37 C.F.R. § 41.50(f).

AFFIRMED -- 37 C.F.R. § 41.50(b)

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